Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of modulating one or more mammalian endothelial cell functional characteristics, said method comprising inducing over-expression of sphingosine kinase, wherein said over-expression is achieved by introducing into said endothelial cell an isolated nucleic acid molecule encoding sphingosine kinase or functional fragment or homolog thereof, wherein said kinase, functional fragment thereof, or homolog thereof comprises sphingosine kinase activity.

2. (Currently Amended) A method of modulating one or more endothelial cell functional characteristics in a mammal, said method comprising inducing over-expression of sphingosine kinase, wherein said over-expression is achieved by introducing into said endothelial cell an isolated nucleic acid molecule encoding sphingosine kinase or functional fragment or homolog thereof, wherein said kinase, functional fragment thereof, or homolog thereof comprises sphingosine kinase activity.

3. (Currently Amended) A method for the treatment and/or prophylaxis of a condition characterised by aberrant or otherwise unwanted endothelial cell functioning in a mammal, said method comprising inducing over-expression of sphingosine kinase, wherein said over-expression is achieved by introducing into said endothelial cell an isolated nucleic acid molecule encoding sphingosine kinase or functional fragment or homolog thereof, wherein said kinase, functional fragment thereof, or homolog thereof comprises sphingosine kinase activity.

4. (Previously Presented) The method according to claims 1, 2, or 3, wherein said endothelial cell is a vascular endothelial cell.

5. (Previously Presented) The method according to claim 4 wherein said endothelial cell functional characteristic is up-regulated by sphingosine kinase over-expression and said characteristic is one or more of viability, proliferation, differentiation, cell surface molecule expression, cytokine responsiveness or enhanced proliferation or viability.

6. (Original) The method according to claim 5 wherein said cell surface molecule is an adhesion molecule.

7. (Cancelled)

8. (Previously Presented) The method according to claim 4 wherein said endothelial cell functional characteristic is up-regulated by sphingosine kinase over-expression and said characteristic is the induction of a pro-inflammatory phenotype.

9. (Cancelled)

10. (Previously Presented) The method according to claim 4 wherein said endothelial cell functional characteristic is up-regulated by sphingosine kinase over-expression and said characteristic is the induction of an angiogenic phenotype.

11.-12. (Cancelled)

13. (Previously Presented) The method according to claim 4 wherein said endothelial cell functional characteristic is up-regulated by sphingosine kinase over-expression and said characteristic is maintenance of the $CD34^{+}$ endothelial cell progenitor phenotype.

14. (Cancelled)

15. (Previously Presented) The method according to claim 3 wherein said condition is vascular engraftment, wound repair, tissue or organ transplantation or the repair of devascularised tissue and said modulated endothelial cell functional characteristic is one or more of enhanced endothelial cell proliferation, enhanced endothelial cell viability or maintenance of the $CD34^+$ endothelial cell progenitor phenotype.

16.-20. (Cancelled)

21. (Withdrawn) The method according to claim 1 wherein said modulation is achieved by contacting said endothelial cell with a proteinaceous or non-proteinaceous molecule which modulates transcriptional and/or translational regulation of the sphingosine kinase gene.

22. (Withdrawn) The method according to claim 1 wherein said modulation is up-regulation of sphingosine kinase levels and said up-regulation is achieved by contacting said endothelial cell with a proteinaceous or non-proteinaceous molecule which functions as an agonist of the sphingosine kinase expression product.

23. (Withdrawn) The method according to claim 1 wherein said modulation is down-regulation of sphingosine kinase levels and said down-regulation is achieved by contacting said endothelial cell with a proteinaceous or non-proteinaceous molecule which functions as an antagonist to the sphingosine kinase expression product.

24. (Withdrawn) The method according to claim 23 wherein said molecule is a mutant sphingosine kinase which mutant is characterised by substitution of the glycine residue at position 82 to aspartate.

25. (Previously Presented) The method according to claim 1 wherein said endothelial cell activity is modulated *in vivo*.

26. (Withdrawn) The method according to claim 1 wherein said endothelial cell activity is modulated *in vitro*.

27.-42. (Cancelled)

43. (Currently Amended) A pharmaceutical composition comprising- a vector capable of transfecting target endothelial cells where said vector comprises a nucleic acid molecule encoding sphingosine kinase or a functional fragment thereof when used in the method claims 1, 2, or 3.